

Figure 1(a). ^1H NMR spectrum of PEG8K homopolymer.

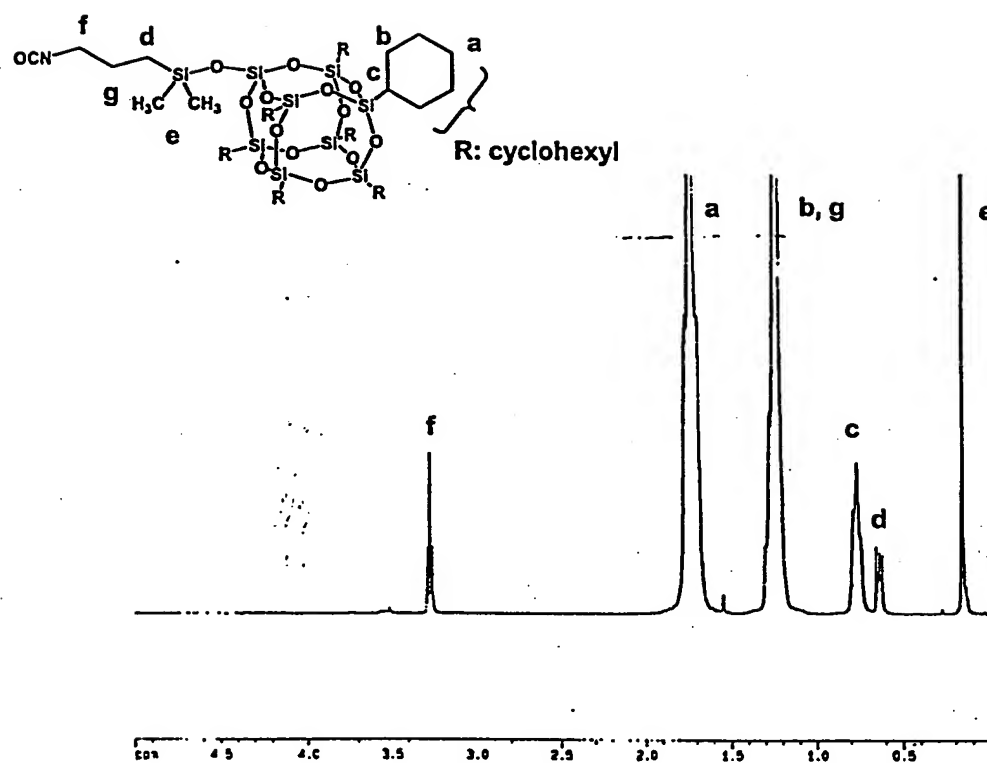


Figure 1(b). ^1H NMR spectrum of POSS macromer.

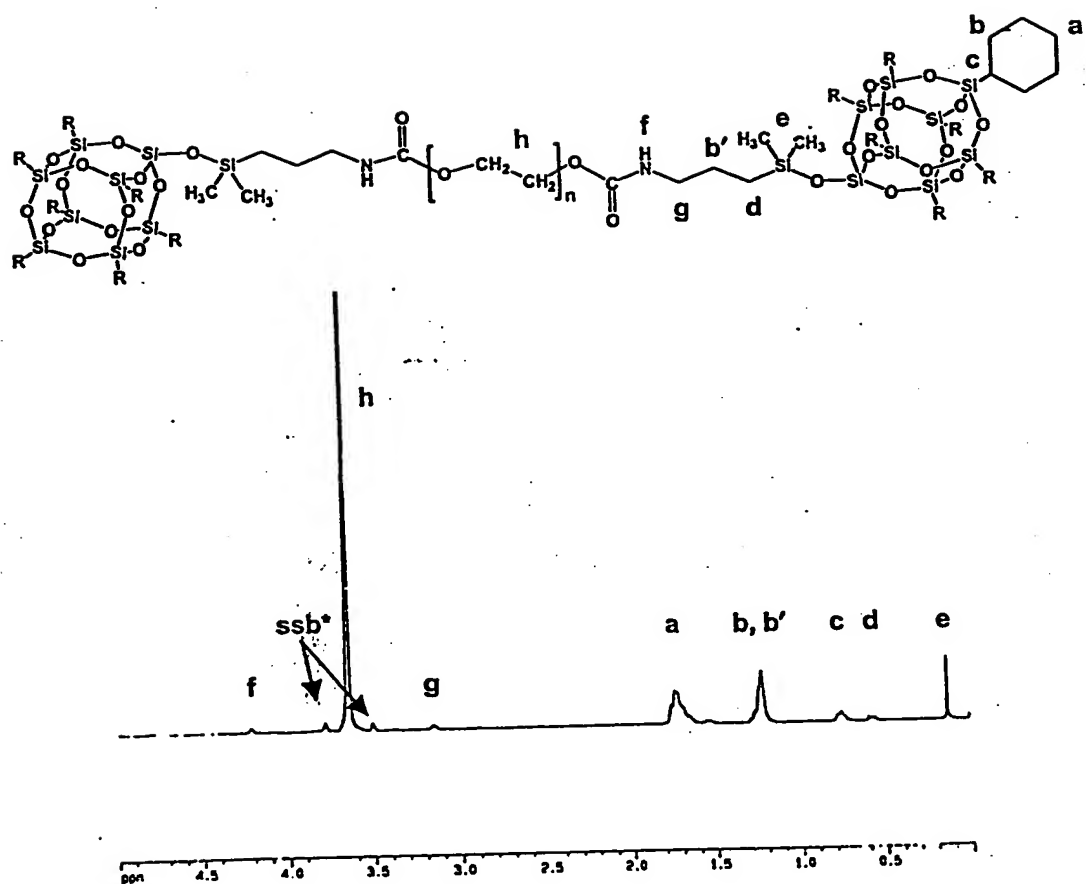


Figure 1(c). ^1H NMR spectrum of the amphiphilic telechelic of PEG8K.
 *ssb indicates a spinning side band.

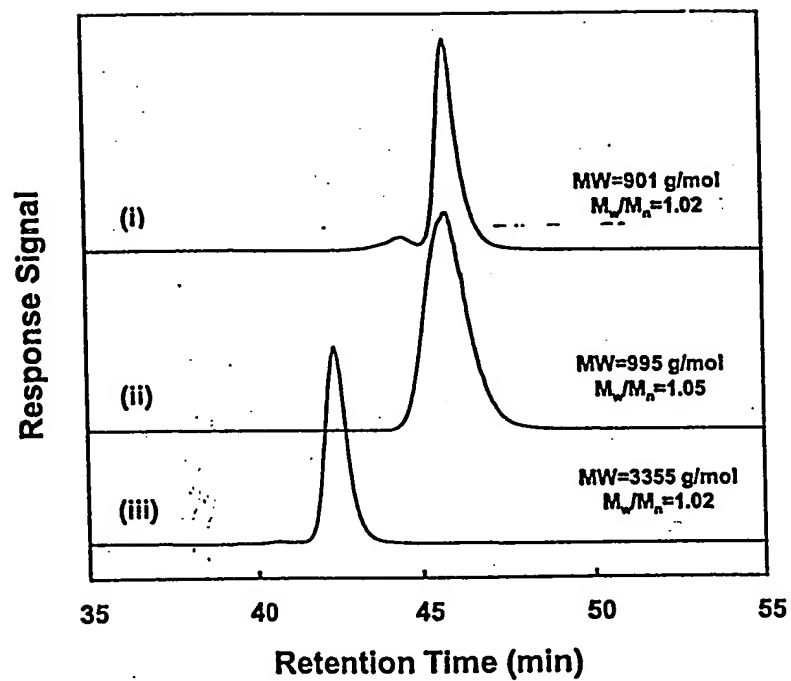


Figure 2(a). GPC Chromatograms of (i) POSS macromer, (ii) PEG1K homopolymer, and (iii) amphiphilic telechelic of PEG1K.

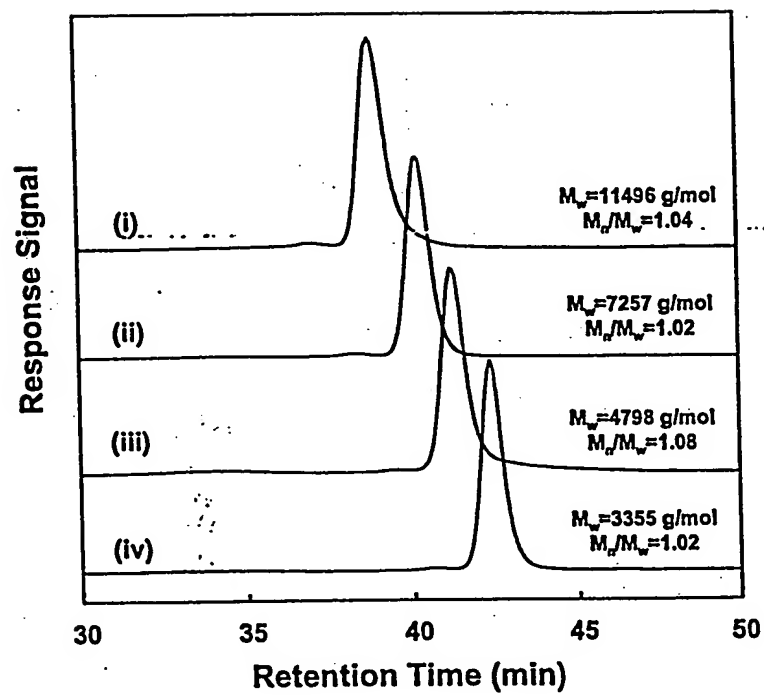


Figure 2(b). GPC Chromatograms of the amphiphilic telechelics of (i) PEG10K, (ii) PEG3.4K, (iii) PEG2K, and (iv) PEG1K.

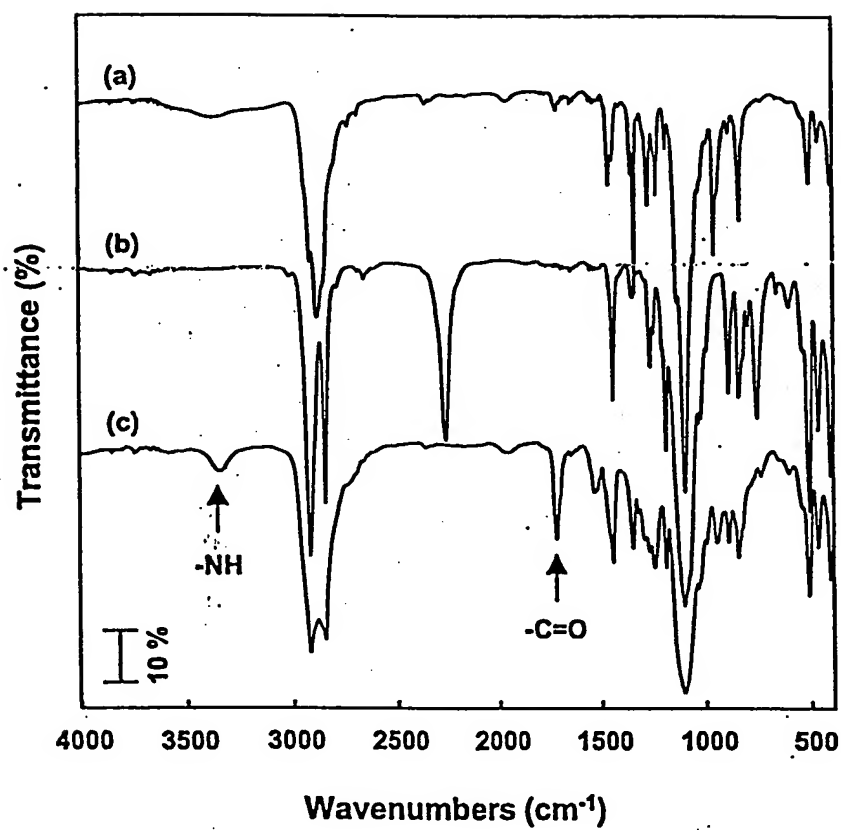


Figure 3. FT-IR spectra of (a) PEG3.4K homopolymer, (b) POSS macromer, and (c) amphiphilic telechelics of PEG3.4K.

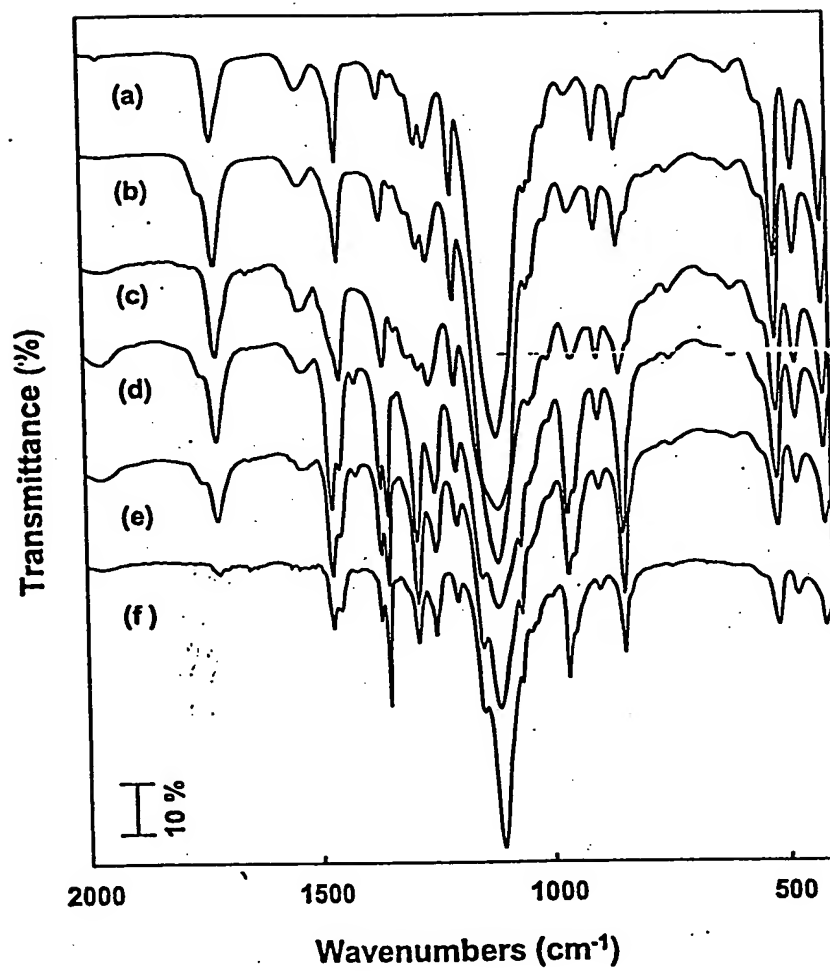


Figure 4. FT-IR spectra of amphiphilic telechelics of (a) PEG1K, (b) PEG2K, (c) PEG3.4K, (d) PEG8K, (e) PEG10K, and (f) PEG3.4K homopolymer.

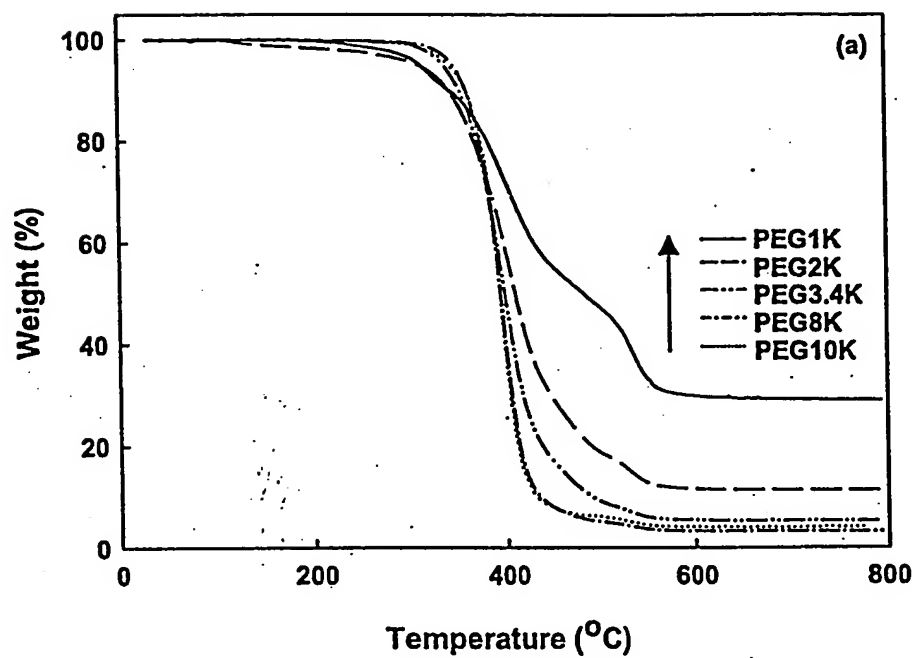


Figure 5(a). Thermogravimetric analysis of the amphiphilic telechelics. A heating rate of 20 °C/min was applied to samples in a nitrogen environment.

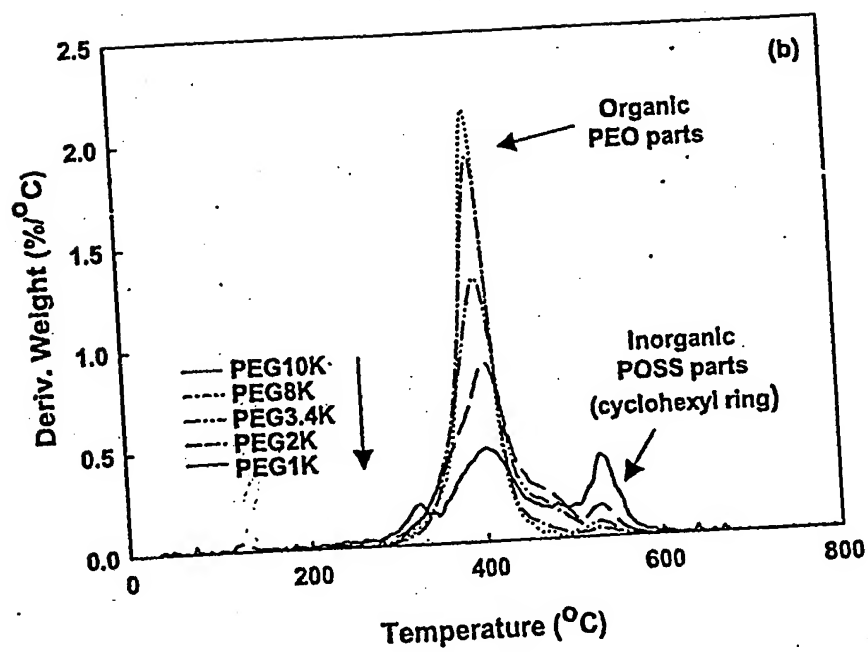


Figure 5(b). Thermogravimetric analysis of the amphiphilic telechelics. Here $d(\text{wt\%})/dT$ is plotted to reveal a two-step decomposition process. Conditions same as Fig. 5(a).

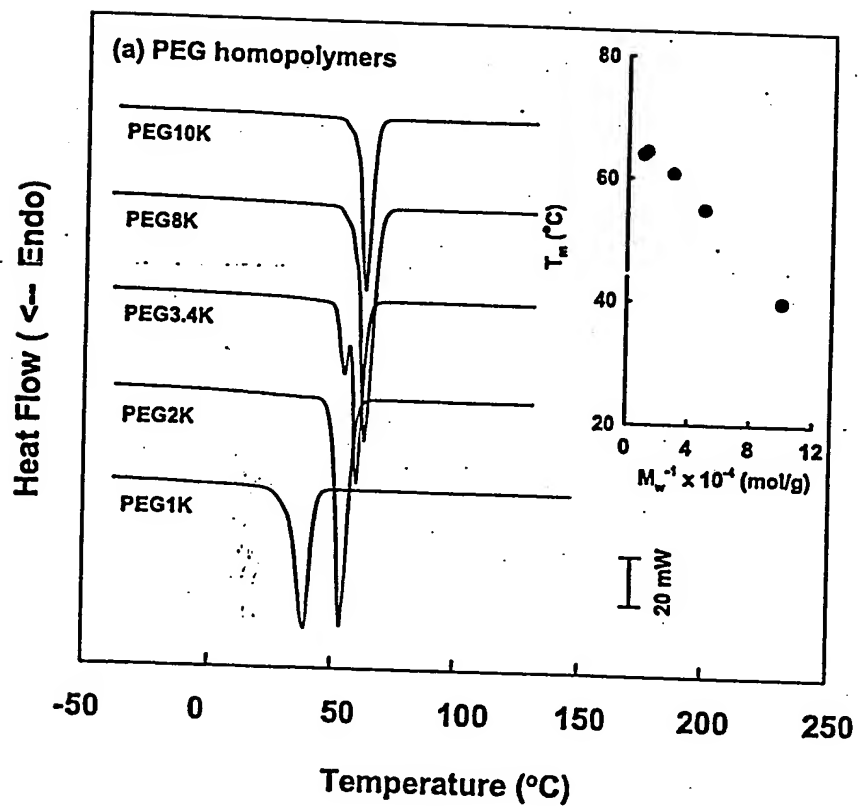


Figure 6(a). Differential scanning calorimeter (DSC) analysis of the PEG homopolymers.

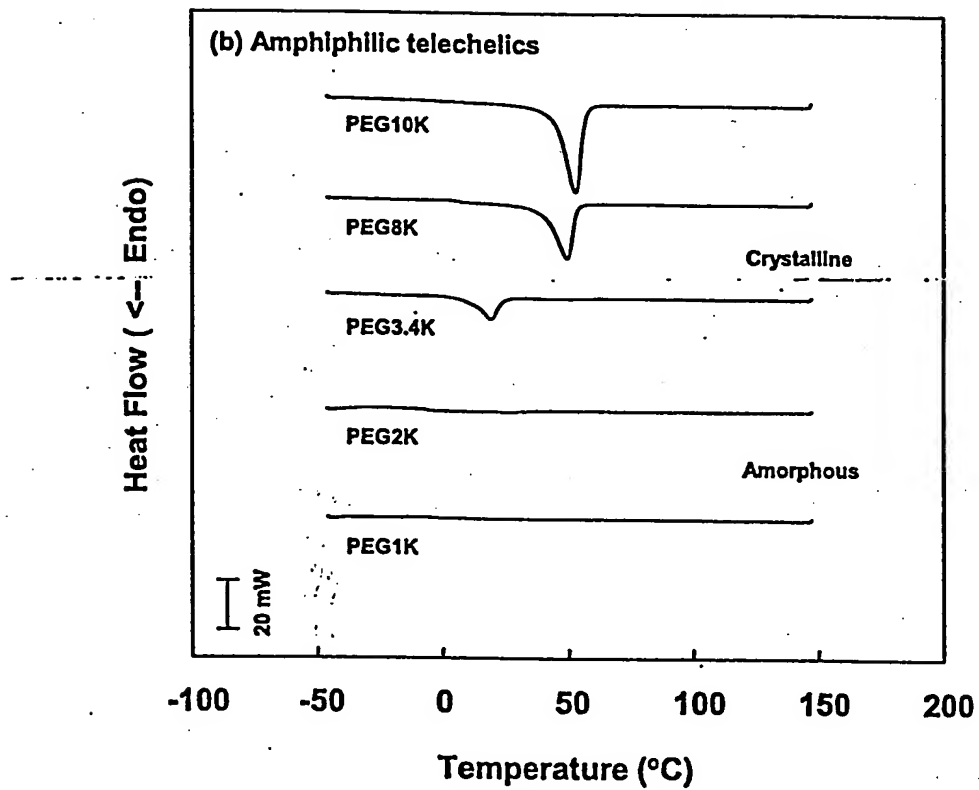


Figure 6(b). Differential scanning calorimeter (DSC) analysis of the amphiphilic telechelics.

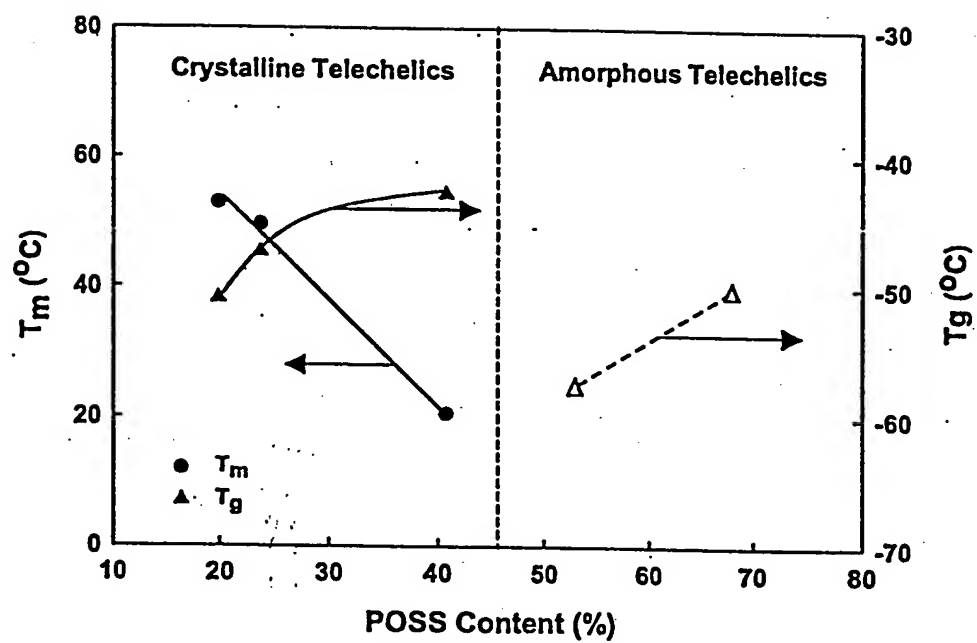


Figure 7. Effects of POSS content on T_m and T_g of PEO segments in the amphiphilic telechelics.